

**Claims**

5        1.- A process for producing pitches from coal tars and distillates thereof, **characterized in**  
that the process is carried out in three steps under mild conditions of pressure and  
temperature, said steps being: oxidative thermal treatment using as reagent air, oxygen,  
low-oxygen air, or mixtures thereof; thermal treatment under inert atmosphere, and  
fractional distillation.

10      2.- The process of claim 1, **characterized in** that the oxidative thermal treatment step is  
carried out at a temperature of less than 400° C, a pressure of less than 10 bar g and a  
residence time in the range of 2-10 seconds, and preferably 350-400° C, 5-10 bar g and  
6-10 seconds, using as reagent air, oxygen, low-oxygen air, or mixtures thereof.

15      3.- The process of claims 1 and 2, **characterized in** that the thermal treatment step under  
inert atmosphere is carried out at 340-400° C, less than 10 bar g and a residence time in  
the range of 3-10 hours, and preferably, 370-400° C, atmospheric pressure and 4-6 hours,  
in order to stabilize the reaction product.

20      4.- The process of claims 1, 2 and 3, **characterized in** that the fractional distillation step  
is carried out preferably under vacuum or by stripping with steam or inert gas, in order to  
adjust the softening point of the pitch.

25      5.- The process of claims 1, 2, 3 and 4, **characterized in** that as a byproduct there is  
obtained anthracene oil which exhibits an increased concentration of  
anthracene/phenanthrene.

30      6.- Use of the pitches obtained by the process of claims 1 to 4 in the particular field of  
carbon precursors.

35      7.- Use of the pitches obtained by the process of claims 1 to 4, for the manufacture of  
electrodes destined to aluminium industry, graphite electrodes (as a binder pitch or  
impregnating pitch) and synthetic graphite in general, binders for refractory industry,  
waterproof materials and electrometallurgical paste.

8.- Use of the anthracene oil obtained as byproduct of the process of claim 5 for the  
manufacture of anthracene paste.